

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Determination That *Pediocactus Bradyi* is an Endangered Species

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines *Pediocactus bradyi* L. Benson (Brady pincushion cactus), a native plant of Arizona, to be an Endangered species. Removal of plants by private collectors and commercial suppliers constitutes the major threat to this cactus. Highway and powerline maintenance and construction, off-road vehicle use, and grazing also threaten this species. This action will extend the protection provided by the Endangered Species Act of 1973, as amended, to this plant.

DATE: This rulemaking becomes effective on November 26, 1979.

FOR FURTHER INFORMATION CONTACT: Mr. John L. Spinks, Chief, Office of Endangered Species, Fish and Wildlife Service, U.S. Department of the Interior, Washington, D.C. 20240 (703/235-2771).

SUPPLEMENTARY INFORMATION:**Background**

Pediocactus bradyi (Brady pincushion cactus) occurs in one Arizona county. The range of this species is very small (only 20 km²). This species is restricted to a specific soil, and occurs in desert scrub communities. *Pediocactus bradyi* is a small seimglobose cactus which reaches two inches in diameter and two and one-half inches in height. The flowers are straw yellow, and the fruits turn brown at maturity. The continued existence of this cactus is in danger, and this rule will extend to it the protection provided by the Endangered Species Act of 1973 as amended. The following paragraphs summarize the actions leading up to this final rule and the factors which cause this species to be Endangered.

The Secretary of the Smithsonian Institution, in response to Section 12 of the Endangered Species Act of 1973, presented his report on plant species to Congress on January 9, 1975. This report, designated as House Document No. 94-51, contained lists of over 3,100 U.S. vascular plant taxa considered to be Endangered, Threatened, or extinct. On July 1, 1975, the Director published a notice in the **Federal Register** (40 FR 27823-27924) of his acceptance of the report of the Smithsonian Institution as

a petition to list these species under section 4(c)(2) of the Act, and of his intention thereby to review the status of the plant taxa named within as well as any habitat which might be determined to be critical.

On June 16, 1976, the Service published a proposed rulemaking in the **Federal Register** (41 FR 24523-24572) to determine approximately 1,700 vascular plant species to be Endangered species pursuant to section 4 of the Act. This list of 1,700 plant taxa was assembled on the basis of comments and data received by the Smithsonian Institution and the Service in response to House Document No. 94-51 and the above mentioned **Federal Register** publication.

Pediocactus bradyi was included in both July 1, 1975, notice of review and the June 16, 1976, proposal. A public hearing on the June 16, 1976, proposal was held on July 22, 1976, in El Segundo, California. A second public hearing was held on July 11, 1979, in Phoenix, Arizona for five Arizona cacti proposed as Endangered, including *Pediocactus bradyi*.

In the June 24, 1977, **Federal Register**, The Service published a final rulemaking (42 FR 32373-32381), codified at 50 CFR detailing the regulations to protect Endangered and Threatened plant species. The rules establish prohibitions and a permit procedure to grant exceptions to the prohibitions under certain circumstances.

The Department has determined that this listing does not meet the criteria for significance in the Department Regulations implementing Executive Order 12044 (43 CFR Part 14) or require the preparation of a regulatory analysis.

Summary of Comments and Recommendations

Hundreds of comments on the general proposal of June 16, 1976, were received from individuals, conservation organizations, botanical groups, and business and professional organizations. Few of these comments were specific in nature in that they did not address individual plant species. Most comments addressed the program or the concept of Endangered and Threatened plants and their protection and regulation. These comments are summarized in the April 26, 1978, **Federal Register** publication which also determined 13 plant species to be Endangered or Threatened species (43 FR 17909-17916). Some of these comments had addressed the general problems of cacti conservation. Additionally many comments on the cactus trade were received in response to the June 7, 1976, proposed rule (41 FR 22915) on prohibitions and permit provisions for plants under Section

9(2)(2) and 10(2) of the Act. These comments are summarized in the June 24, 1977, **Federal Register** final rule (43 FR 17909-17916) on plant prohibitions and permit provisions. No comments dealing specifically with *Pediocactus bradyi* were received during these official comment periods. The Governor of Arizona was also notified of the proposed action.

On July 11, 1979, the Service held a second public hearing in Phoenix, Arizona, and again solicited comments on five Arizona cacti. During this period the Bureau of Reclamation voiced concern that there was a lack of data to support the listing of these five cacti and a lack of detailed information on their Critical Habitats. However, extensive data supporting the listing of these taxa is available from either the Service's regional office in Albuquerque, N.M. or the Washington, D.C. Office of Endangered Species. It has been determined that designating Critical Habitat is imprudent due to the increased pressure this would cause due to over-collecting. Conservationists, botanists, the Bureau of Land Management, and the Arizona Commission of Agriculture and Horticulture all indicated their concurrence with and/or their strong support for the proposal to determine *Pediocactus bradyi* to be an Endangered species.

Conclusion

After a thorough review and consideration of all the information available, the Director has determined that *Pediocactus bradyi* L. Benson (Brady pin cushion cactus; synonyms: *Toumeyia bradyi* (Benson) W. H. Earle) is in danger of becoming extinct throughout all or a significant portion of its range due to one or more of the factors described in Section 4(a) of the Act.

These factors and their application to *Pediocactus bradyi* are as follows:

(1) *The presence of threatened destruction, modification, or curtailment of its habitat or range.* *Pediocactus bradyi* occurs only in one small area in one Arizona county, restricted to one soil type. The area is adjacent to a major highway and recreation area. Most of the land on which these plants occur is federally administered by the Bureau of Land Management and the National Park Service. The portion of the population lying adjacent to the highway has been disturbed through maintenance and construction activities. In some cases the plants appear to have recolonized roadside areas where disturbance occurred in the past. Power lines pass through part of the area and

have disturbed a minimal amount of the species' habitat. Any future work on the highway or power lines, especially any shift in the present right of ways, should take into account the presence of this cacti. The portion of the range which is on lands administered by the National Park Service is unfenced and is receiving increasing disturbance from illegal use of off-road vehicles.

(2) *Overutilization for commercial, sporting, scientific, or educational purposes.* Collection is the major threat to this species. The proximity of the range to a major highway makes it easily accessible to even casual collectors, unlike more protected remote and inaccessible locations of some other rare species. The species has been collected commercially and privately and is especially vulnerable during the short flowering season in the spring because of the ease with which the plants may be located when they are in flower. The seasonal nature of its vulnerability is accentuated by its retracting to or just below the soil surface during most of the year making the plants almost impossible to locate during hot, dry periods.

(3) *Disease or predation (including grazing).* Cattle grazing adversely affects the plants during the wet seasons and is a definite threat throughout most of this species' range. There is a possibility that the areas may be grazed by sheep in the future, an impact which could have a severe impact on the species because of the density of animals in flocks.

(4) *The inadequacy of existing regulatory mechanisms.* This species is offered some protection under Arizona law, A.R.S. Chapter 7, Section 3-901, which requires a permit for the collection of members of the genus *Pediocactus* in particular and all members of the family Cactaceae. *Pediocactus bradyi* occurs on lands administered by the Bureau of Land Management, the National Park Service, and on the Navajo Indian Reservation. The taking or vandalizing of plants is not prohibited by the Endangered Species Act. However, where Federal lands are involved, other restrictive provisions are available. Bureau of Land Management regulations prohibit the removal, destruction, and disturbance of vegetative resources unless such activities are specifically allowed or authorized (43 CFR 6010.2). National Park Service regulations prohibit the possession, destruction, injury, defacement, removal or disturbance of any plant in natural, historic, and/or recreational areas (36 CFR 2.20). The Navajo Indian Reservation is a Federal

reservation and through tribal resolution has the ability to restrict the taking of plants from their lands, as well.

All native cacti are on Appendix II of the convention on International Trade in Endangered Species of Wild Fauna and Flora. However, this convention regulates export of the taxon, but does not regulate internal trade in the cactus, or habitat destruction. Except as noted in the preceding paragraph, no other Federal protective laws currently apply to this species.

(5) *Other natural or manmade factors affecting its continued existence.* *Pediocactus bradyi* is restricted to a very specialized and localized soil type, and its total range is very geographically limited which tends to intensify any adverse modifications of the species habitat and depletion of populations due to over-collecting. The total remaining wild populations of the plant are estimated to contain only a few hundred individuals. Frost heaving is also a factor limiting the success of the species. Soil compaction by cattle may increase the effects of frost heaving. The heaving is a natural process which alone should not cause a serious decline in the numbers of the plant.

Effect of the Rulemaking

Section 7(a) of the Act, as amended in 1978, provides:

The Secretary shall review other programs administered by him and utilize such programs in furtherance of the purposes of this Act. All other Federal agencies, shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this Act by carrying out programs for the Conservation of Endangered species and Threatened species listed pursuant to Section 4 of this Act. Each Federal agency shall, in consultation with and with the assistance of the Secretary, ensure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an 'agency action') does not jeopardize the continued existence of any Endangered species or Threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with the affected States, to be critical, unless such agency has been granted an exemption for such action by the Committee pursuant to subsection (h) of this section.

Provisions for Interagency Cooperation were published on January 4, 1978, in the **Federal Register** (43 FR 870-876) and codified at 50 CFR Part 402. These regulations are intended to assist Federal agencies in complying with section 7(a) of the Act. This rulemaking requires Federal agencies to satisfy these statutory and regulatory obligations with respect to this species.

Endangered species regulations in Title 50 of the Code of Federal Regulations set forth a series of general prohibitions and exceptions which apply to all Endangered species. The regulations which pertain to Endangered plant species are found at § 17.61-17.63 (42 FR 32378-32381).

Section 9(a)(2) of the Act, as implemented by § 17.61 would apply. With respect to any species of plant listed as Endangered, it is, in general, illegal for any person subject to the jurisdiction of the United States to import or export such species; deliver, receive, carry, transport or ship such species in interstate or foreign commerce by any means and in the course of a commercial activity; or sell or offer such species for sale in interstate or foreign commerce. Certain exceptions apply to agents of the Service and State conservation agencies.

Section 10 of the Act and regulations published in the **Federal Register** of June 24, 1977 (42 FR 32373-32381, 50 CFR Part 17), also provide for the issuance of permits under certain circumstances to carry out otherwise prohibited activities involving Endangered plants.

Effect Internationally

In addition to the protection provided by the Act, all native cacti are on Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora which requires a permit for export of the taxon. The Service will review whether it should be considered under the convention on Nature Protection and Wildlife Preservation in the Western Hemisphere or other appropriate international agreements.

National Environmental Policy Act

An Environmental Assessment has been prepared and is on file in the Service's Washington Office of Endangered Species. The assessment is the basis for a decision that this determination is not a major Federal action which significantly affects the quality of the human environment within the meaning of Section 102(2)(C) of the National Environmental Policy Act of 1969.

Critical Habitat

The Endangered Species Act Amendments of 1978 added the following provision to subsection 4(a)(1) of the Endangered Species Act of 1973:

At the time any such regulation (to determine a species to be an Endangered or Threatened species) is proposed, the Secretary shall by regulation, to the maximum extent prudent, specify any habitat

of such species which is then considered to be Critical Habitat.

Pediocactus bradyi is threatened by taking (See discussion under factors 2 and 4 in the conclusion section of this rule), and the taking of plants is not prohibited by the Endangered Species Act of 1973. Publication of Critical Habitat maps would make this species more vulnerable, and therefore it would not be prudent to determine Critical Habitat. Federal agencies and other parties will be notified of the locations of these plants for protection purposes. BLM, the principal federal agency involved, is aware of the location of this plant. The Service now proceeds with this final rulemaking to determine this species to be Endangered under the authority contained in the Endangered Species Act of 1973, as amended (16 U.S.C. 1531-1543).

The primary author of this rule is Ms. E. LaVerne Smith, Office of Endangered Species, U.S. Fish and Wildlife Service, Washington, D.C. 20240 (703/235-1975). Status information for this species was compiled by Dr. A. M. Phillips III, Dr. B. G. Phillips, Mr. L. T. Green, Ms. J. Mazzoni, and Ms. Elaine Peterson (Museum of Northern Arizona, Flagstaff, Arizona).

Regulation Promulgation

Accordingly, § 17.12 of Part 17 of Chapter I of Title 50 of the U.S. Code of Federal Regulations is amended as follows:

1. Section 17.12 is amended by adding, in alphabetical order by family, genus, species, the following plant:

§ 17.12 Endangered and threatened plants.

Species		Range		Status	When listed	Special rules
Scientific name	Common name	Known distribution	Portion endangered			
Cactaceae—Cactus Family:						
<i>Pediocactus bradyi</i>	Brady pincushion cactus.	U.S.A. (AZ)	Entire	E	NA

Dated: October 16, 1979.

Lynn A. Greenwalt,
Director, Fish and Wildlife Service.

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